

REPLY TO: 5230 Evaluation

FEB 10 1975

SUBJECT: Douglas-fir Tussock Moth Infestation - Santa Fe and Los Alamos (R-3 75-27)

TO: Forest Supervisor, Santa Fe NF



A Douglas-fir tussock moth, Orgyia pseudotsugata McD., appraisal was conducted at Santa Fe, New Mexico, on November 19, 1974, and at Los Alamos, New Mexico, on November 20, 1974. The purpose of the appraisal was twofold: (1) to determine the trend of the tussock moth infestation for 1975, and (2) to determine if the tussock moth infestation on ornamental trees in Santa Fe and Los Alamos posed a threat to spruce-fir stands in adjacent forested areas.

In Santa Fe, the ratio of new to old egg masses and the intensity of defoliation were used to determine the status of the tussock moth. Egg masses were sampled below 7 feet in the crown to avoid unsightly pruning. Percent defoliation was visually estimated. Three areas were sampled: (1) the courtyard at St. Vincent Hospital, (2) the property of Dean Zinn, attorney, and (3) the water storage area of the Public Service Company of New Mexico. Table 1 summarizes the results of the Santa Fe survey.

In 19⁷², trees on approximately 300 acres of downtown Santa Fe were sprayed in an effort to control the Douglas-fir tussock moth. The spray area included a buffer zone to the east, west, and south of the 19⁷² infestation (Fig. 1). By 1974, the tussock moth infestation had expanded from the 19⁷² infestation area into the buffer zone. Also, trees outside the 19⁷² spray area were found infested in 1974.

Results of the 1974 appraisal indicate that the tussock moth had declined in the area of the 19⁷² infestation. Only one viable egg mass was found in the trees at St. Vincent Hospital. Large numbers of old egg masses were prevalent, with nearly total defoliation of some trees.

The tussock moth appears to be on the decline at the water storage area of the Public Service Company of New Mexico outside the 19⁷² spray area. No viable egg masses were found, but old egg masses were prevalent in the lower crown of all infested trees. Average defoliation for infested trees in this area was about 33 percent. Some additional defoliation can be expected in this area as the tussock moth declines in 1975.

The tussock moth appears to be on the increase on the property of Dean Zinn. This area was within the 1972 spray buffer zone. The new to old egg mass ratio was 1:2.5, indicating the presence of a light population. Average defoliation in the area was 10 percent. Renewed defoliation can be expected in this area in 1975.

In Los Alamos, individual infested trees were tallied and mapped (Fig. 2). The infestation was concentrated mainly between Pueblo Canyon and Los Alamos Canyon. No infested trees were found in either Pueblo Canyon or Los Alamos Canyon, but two newly infested ornamental trees were located north of Pueblo Canyon. The potential for a tussock moth infestation in adjacent forested areas exists, but, as yet, has not developed. Some further northerly advance of tussock moth on ornamentals can be expected in upcoming years. In general, the Los Alamos infestation was declining in 1974.

Chemical control is not recommended at this time. Infestations on ornamental trees can be curtailed by removing new egg masses and larvae and destroying them. New egg masses may be collected and destroyed during the fall and winter, and larvae may be washed from the trees and destroyed in the spring with a standard garden hose.

Donald P. Graham

DONALD P. GRAHAM
Director
Forest Insect and Disease Management

3 Enclosures:

Table 1

Fig. 1, Map-Santa Fe

Fig. 2, Map-Los Alamos

cc: PNW (Stelzer), Corvallis
RM (Jennings), Albuquerque

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Table 1.--Plot data for 1974 tussock moth appraisal, Santa Fe, New Mexico.

of area	Tree No.	Species	% defoliation	No. new egg masses	No. old egg masses	Trend
St. Vincents Hospital	1	Spruce	10	1	4	Decreasing
	2	White fir	95	0	25	
	3	White fir	95	0	23	
	4	Douglas-fir	35	0	6	
Dean Zinn	5	White fir	10	5	1	Increasing
	6	White fir	10	1	8	
	7	White fir	10	0	6	
Public Service Co. of New Mexico	9	Douglas-fir	50	0	15	Decreasing
	10	Spruce	30	0	20	
	11	Douglas-fir	60	0	60	
	12	Spruce	30	0	100	
	13	Spruce	15	0	7	
	14	Spruce	10	0	10	

FIGURE 1
TUSSOCK MOTH DISTRIBUTION 1974

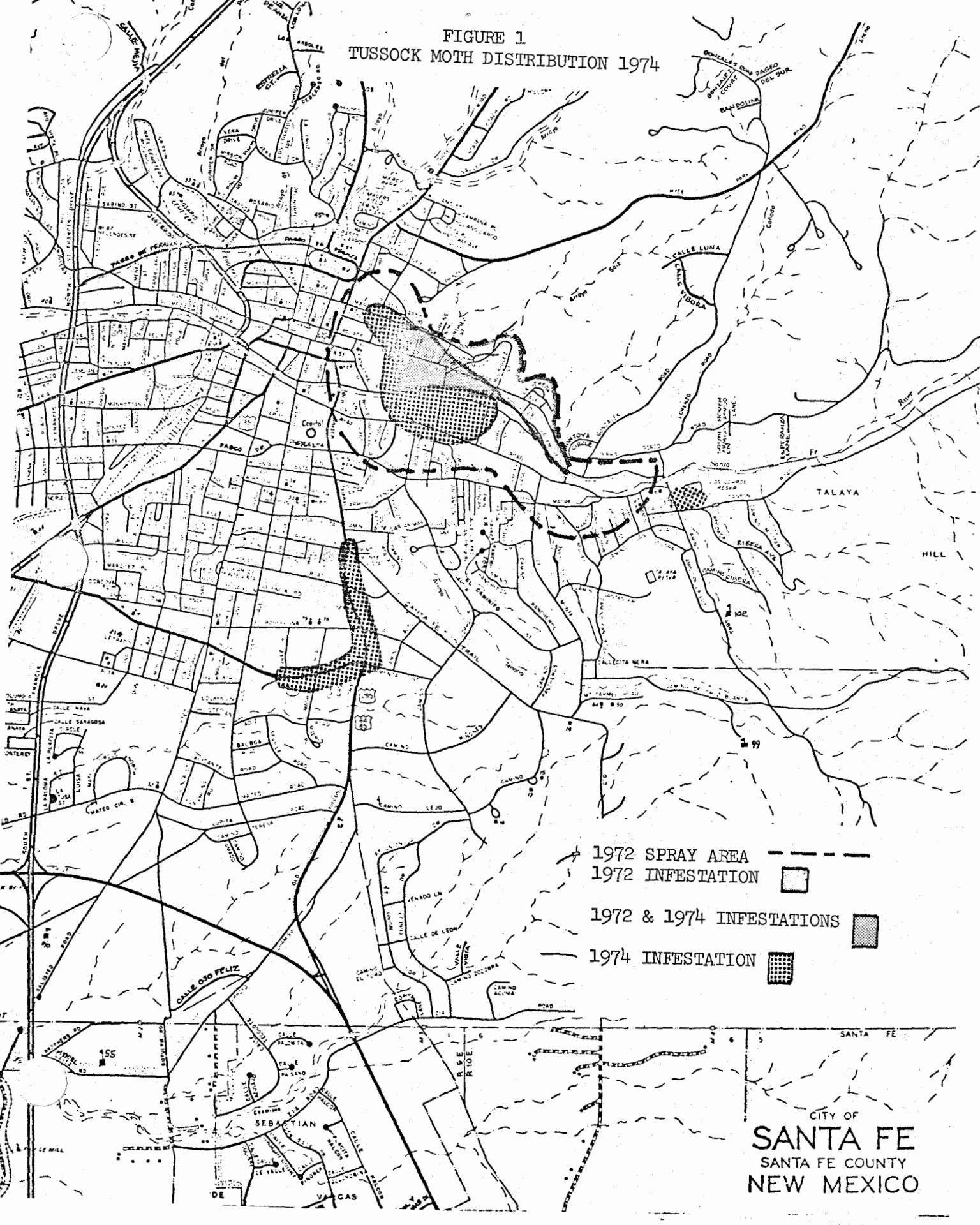


Fig. 2.--Tussock moth distribution, 1974.

- Location of individual infested trees,
Los Alamos, New Mexico.

